The Maryland Apple Dumpling Radio Amateur Society - W3MAD
P.O. Box 2468, Wheaton, MD 20902

Meetings: **2nd & 4th Thursdays at 7:00 P.M.**
Saint Paul's Church, 10401 Armory Avenue
Kensington, MD 20895

Repeaters: **444.100/449.100 MHz (PL-2A)**
145.450/144.850 MHz (PL-5A)

Nets: **1st & 3rd Thursdays at 9:00 P.M. on 145.450 MHz**

Information: **Leo Boberschmidt W3LEO @ 301-946-3738**
Jean Blacik N3PLC @ 301-984-6114

26 May 1998

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RM-9267
Secretary
Federal Communications Commission
1919 M St., NW
Washington, DC 20554

To: The Commission

Subject: Comments on Petition for Rule Making Submitted by the Land Mobile Communications Council

I am an Amateur Radio licensed operator [W3LEO] and I am submitting the enclosed comments on this matter in my capacity as President of the Maryland Apple Dumpling Radio Amateur Society [MADRAS], an amateur radio club serving Montgomery County, MD. I thank the Commission for this opportunity to comment on a matter of great concern to amateur radio operators in our club.

Sincerely,

Leo J. Boberschmidt, W3LEO
President, Maryland Apple Dumpling Radio Amateur Society [MADRAS]
3928 Denfeld Court
Kensington, MD 20895-1539

301-946-3738

Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of	)	
Proposed Reallocation of 420	)	
To 430 MHz and 440 to 450 MHz	)	**RM 9267**
From the Federal Government to	)	
The Private Mobile Radio Service	)	

To: The Commission

Comments On
Petition For Rule Making
Submitted By The
Land Mobile Communications Council

I am an Amateur Radio licensed operator (W3LEO) making use of the secondary Amateur Radio Service (ARS) frequency allocations from 420 MHz to 450 MHz. I am opposed to RM 9267 submitted by the Land Mobile Communications Council (LMCC). I believe the LMCC petition seeking access to 70 cms is incompatible with continued ARS use of this secondary allocation. Though the LMCC offers a possible "sharing arrangement" with the ARS, they have not provided the details for consideration as to how this would be accomplished.

My specific comments follow and are drawn from my capacity as President of the Maryland Apple Dumpling Radio Amateur Society [MADRAS]. MADRAS owns and operates two repeaters located strategically in Rockville MD [in the Washington DC

Leo J. Boberschmidt, W3LEO
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301-946-3738

metro area] to provide emergency communications. One of these repeaters operates in the 2-meter frequency band allocation, the other in the 420 MHz to 450 MHz allocation under consideration. I do not believe the LMCC proposal to share the present allocation to be compatible with our system. The reason for my contention is that one of our repeaters operates in the upper spectrum LMCC is seeking. Additional interference (above that already being experienced in this area) in either segment would negate the capability of our repeater to perform optimally. Moving our repeater to another allocation available to the ARS would be beyond our financial means and therefore our system, which has served the area for more than 12 years, would no longer be available. Our repeater is used for emergency preparedness training as well as exercises and real events. The Maryland RACES / ARES uses the capabilities afforded by our repeater. The loss of this system would create a void in our capability to provide support to State and Local government services.

In my capacity as President of MADRAS, I can report we have 34 members and that 25 of them presently have equipment operating in the spectrum that LMCC is seeking. In addition, there is the repeater owned and operated by the club. We have computed the average cost of each of these systems [radios, antennas, batteries] at approximately $780. The total value being provided for the benefit of the Amateur Radio Service and in support of public service by our club [including our repeater] is over $20,000 in equipment and untold man-hours in construction, maintenance and technology refreshment of these systems.

Leo J. Boberschmidt, W3LEO
3928 Denfeld Court
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Having stated our investment in and use of our ARS systems deployed in the frequency spectrum being sought by the LMCC, I turn now to other factors bearing on my belief the LMCC petition seeking access to 70 cms is incompatible with continued ARS use of this secondary allocation.

1. In their petition, LMCC fails to recognize ARS use of frequencies in the 420-430 MHz spectrum; I doubt, therefore, their statement that sufficient studies have been concluded to determine compatibility.

2. In their petition, LMCC asserts that PRMS operations are of an extremely localized nature and therefore would not interfere with other co-channel / adjacent channel users of the same spectrum due to the nature of PRMS narrowband techniques. This is simply not a proven statement, i.e. the more signals present in any given segment of spectrum the higher the noise floor in that segment, regardless of techniques employed to avoid interference. What is often overlooked by organizations such as LMCC is the fact that ARS radios operate at significantly higher sensitivity levels (on the order of tenths of microvolts, minus 125 to 135 dbm) in order to maximize the operation of a system given limited access to spectrum and the need to serve a community of interest (COI) in a given geographic area. Any increase in noise floor often will inhibit an ARS system from being able to provide the services for which it was designed.

Leo J. Boberschmidt, W3LEO
3928 Denfeld Court
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3. LMCC contends that PRMS operations in three US cities along the common border with Canada have operated without interference across the border. This assertion is not supported by the facts as ARS systems in Canada have been adversely affected by the presence and operation of the PRMS systems in those cities. Reports of such interference can be obtained from the St. Lawrence Valley ARS Frequency Coordination entity via the American Radio Relay League [ARRL], Newington, CT.

LMCC makes the point that PRMS use is for immediate safety and operational necessity; yet they contend that frequencies in the 2 GHz spectrum are not suitable for PRMS use. Our experience is just the opposite. ARS communications, using allocations in and around 2304 MHz, have proven capability to operate at distances well beyond line of sight. PRMS operations in the spectrum at and above 2.0 GHz would meet the LMCC's immediate needs for short distance, highly-localized, reliable communications. Such an allocation by the FCC to the PRMS community would afford an entirely new market into which technology companies would develop and sell their products – expanding our nation's technology base, creating jobs in a multitude of sectors, i.e. R&D, manufacturing, sales, maintenance and repair, installation, while optimizing use of a scarce national resource – our frequency spectrum.

In closing, I want to make the point that although LMCC goes to great lengths in their petition to highlight the attributes and immediate capabilities associated with PRMS

operations, they seem to ignore the very same attributes and capabilities the ARS provides using the very spectrum being sought by the LMCC. The history and past performance record of significant accomplishments on behalf of public service which ARS operations have provided, at no cost to the public being served, during periods of very similar "life-threatening" scenarios outlined by the LMCC are a direct result of ARS volunteer, not-for-profit efforts and major investments in the 420 to 450 MHz spectrum. [See Addendum at the end of these comments for examples of some of the ARS volunteer efforts so far this year.

It has been said that ARS operations ought to migrate from its present technology to embrace the more modern technologies employing spread spectrum, digital networking (along the lines of trunking systems), CDMA, TDMA, advanced audio compression techniques and the like. To the extent we can afford such a migration we are doing so. However, there are repeated situations wherein the ARS has provided the only reliable emergency communications for extended time periods. This fact should not be overlooked during consideration of the LMCC petition. The very diversity offered by ARS deployed systems represents a true national asset which has time and again proven its value when CMRS systems have become overloaded or suffered single points of failure modes in crises situations. PRMS offers no such remedy for the national good and well-being — the ARS use of 420 to 450 MHz does.

Leo J. Boberschmidt, W3LEO
3928 Denfeld Court
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Selected Ham Radio Emergency Communications Efforts in 1998:
Addendum to Comments of Leo J. Boberschmidt, W3LEO, on RM-9267

From: American Radio Relay League [ARRL] Amateur Radio News
[http://www.arrl.org/news/index.html]:

ARRL Bulletins:

Ice Storm Relief Effort Continues: ARRL Bulletin 10 - January 23, 1998
"...The initial response to the ice storm disaster would not have been possible without ham radio, according to Jim Edmonds, WA1KPG, who lives near Syracuse, New York... The first request by the Red Cross and the New York State Emergency Management office was, 'please send us all your hams'," he said...ham radio became a focal point in the shelters, too. When updated condition reports were being given over the ham radio, people would run to cluster around. It became apparent that ham radio was the lifeline to the outside world for communication...

Hams Help in Aftermath of Florida Tornadoes: ARRL Bulletin 16 - February 27, 1998
"...amateurs were providing communications for shelters and had put in hundreds of operator-hours in Sumter County alone...Other hams were involved in damage assessment and in providing backup communication to relieve already-congested commercial systems..."

Ham Radio Eases Tornado Recovery in Minnesota: ARRL Bulletin 23 - April 2, 1998
"...During the next day or so after the tornado struck, ham radio was the only communication out of the city and the primary means to coordinate supplies into the city from the Red Cross in Mankato to the shelters in St. Peter. The morning after the tornado, the Salvation Army arrived to distribute food. Hams provided logistical support for that effort as well..."

The ARRL Letter Online [http://www.arrl.org/arrlletter/]:

Feb 20, 1998:
"**Hams help in apartment house fire**: Westchester County (New York)...Hams shadowed Westchester County Red Cross officials and provided communication at the chapter headquarters and at a shelter set up at White Plains High School..."

Mar 27, 1998:
"**Georgia hams rally to help in tornado's wake**: Hams in the Gainesville, Georgia, area responded quickly March 20 after a tornado ripped a ten-mile swath through northeastern Georgia...the tornado knocked out power, and cellular telephone systems soon became overloaded and unusable. No telephone service was available in the affected area, so the

Leo J. Boberschmidt, W3LEO
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LARC UHF repeater's autopatch was pressed into service to make emergency phone calls until normal telephone service was restored..."

Apr 17, 1998:
"**Alabama twisters bring out best in hams**: As the severe weather approached, dozens of hams spent hours on weather-spotting nets assisting the National Weather Service in tracking the storms and relaying reports of damage, hail, injuries and relief operations...Those attempting to track the weather on the ground gathered information not only via ham radio nets but via an Internet/packet radio gateway developed by hams in Alabama. The digital Internet/packet gateway has an extensive wide-area dedicated RF node network and provides hard copy of severe weather bulletins, exchange of storm and damage reports, and keyboard-to-keyboard contact with supporting SKYWARN groups...As the extent of the damage became clear, hams in Birmingham were called upon to provide communication backup at Red Cross shelters set up for storm victims..."

Apr 24, 1998:
"**Tennessee hams volunteer for tornado duty**: Several ARES nets were activated in Davidson, Rutherford, Maury, and Sumner counties and coordinated with the NWS weather-spotters' net, with Robert Harris, N4PQV, as net control. Hams from Nashville and surrounding counties reported storm damage and funnel cloud sightings and helped to confirm the observations of the NWS Doppler radar. Hill says these nets stayed active into the night as the temperature dropped and the risk of additional storms rose...Working with the Red Cross, some hams manned radios and provided directions to the Red Cross Emergency Response Vehicles (ERVs). Others handled logistical tasks, repaired equipment and installed new antennas as needed, and set up a portable tower (borrowed from the Nashville ARC) to help provide communication at the primary shelter and feeding facility..."

May 1, 1998:
"**Hams help in second Tennessee tornado**: While an April 16 tornado in downtown Nashville, Tennessee, got most of the media attention that day, a second potent storm struck some 70 miles to the south in Lawrence County. Hams mustered to help in storm spotting, rescue and recovery, and damage assessment...the SKYWARN Net was activated on the afternoon of April 16 and ham weather spotters were among the first to report the tornado entering the county from the west...the SKYWARN activity helped speed up the official response to the emergency. "Because the group is well known in the community, local fire departments and other county agencies monitor the SKYWARN repeater and were able to start emergency service personnel into the stricken areas almost immediately," he reports. SKYWARN members began damage assessment once the tornado had cleared the county. During this phase, hams discovered at least two injured people and summoned help via ham radio...In ceremonies April 21, SKYWARN members were officially recognized for helping to save lives in northern Lawrence County by providing early warning of the approaching storm. County officials commended the

group's efforts and presented citations to those who had helped in the storm-spotting activities..."

May 1, 1998:
"**Red Cross honors New York ARES/RACES**: The American Red Cross chapter of Northeastern New York has formally recognized Amateur Radio's role during the January 1998 ice storm by presenting New York State RACES with its 1998 Good Neighbor Award. The award also acknowledged the hobby's continued support for the disaster relief agency...The Good Neighbor Award goes each year to an individual or organization outside of the American Red Cross that makes a significant humanitarian contribution to the local, national, or international community...

May 15, 1998:
"**Alabama hams have busy week**: May 9 capped a busy week for the National Weather Service and for hams around Alabama. The Alabama Emergency Response Team--ALERT--responded to requests for communications assistance five times during the week, including twice on May , according to ALERT on-call coordinator Janice Rock, KF4PVR...Rock said. At one point, Tuscaloosa county spotters had to deal with two funnel clouds at the same time. That made for a lot of communications needs..."

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